



iPad 4 Wi-Fi Teardown

We tore down the iPad 4 on November 1, 2012.

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INTRODUCTION

We got our hands on the fourth generation of iPad; we shall call it iPad 4. The iPad 4 is kind of like a fourth book added on to a trilogy: its release was a bit sudden and unexpected, but it's a part of the group, nonetheless. This fourth iteration of iPad shares a lot of similarities with the previous version, so instead of our traditional, exploratory teardown, we're going to play "spot the differences" by illustrating all the changes from the last generation.

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TOOLS:

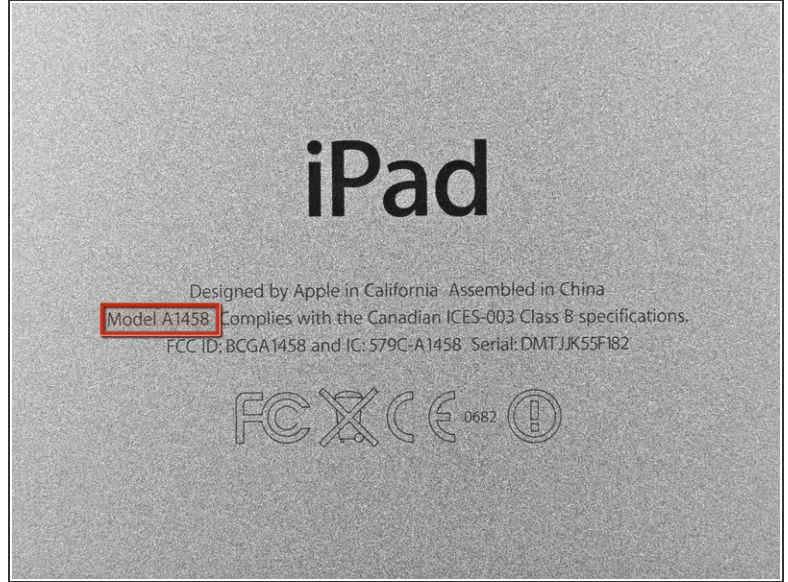
- [iFixit Opening Picks set of 6](#) (1)
 - [iOpener](#) (1)
 - [Phillips #00 Screwdriver](#) (1)
 - [iFixit Opening Tools](#) (1)
 - [Spudger](#) (1)
-

Step 1 — iPad 4 Wi-Fi Teardown



- Welcome, ladies and gentlemen.
- Apple has stunned the tech world once again. A mere 7 months after the announcement of the iPad 3, the iPad 4 was introduced on October 23, 2012.
- Tech Specs:
 - Dual-core A6X processor with quad-core GPU
 - 9.7 inch LCD, backlit in-plane switching LED with 2048×1536 pixel Retina display
 - 16, 32, or 64 GB flash memory ([at launch](#))
 - 5 MP rear-facing camera
 - Lightning connector

Step 2



- One of the major differences between the 3rd and 4th generation iPads is the connector. The 3rd gen (top) has the 30-pin dock connector, while the 4th gen (bottom) has the Lightning connector.
- The iPad 4 has a new model number, A1458.

Step 3



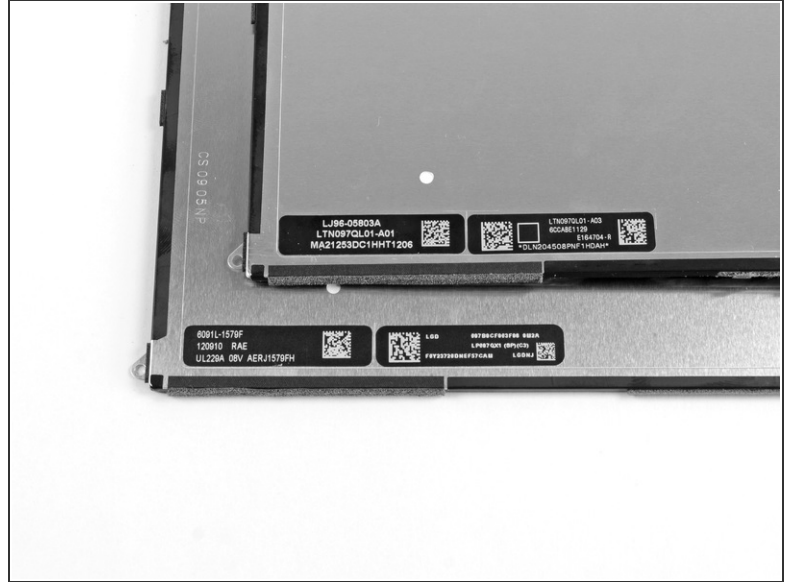
- [Continuing the trend](#), this iPad is glued shut. This isn't our first adhesive-riddled iPad, and we've been working to figure out how to make the painful opening process a lot easier.
- Our heated-up [iOpener](#) lets us apply heat just where it's needed, softening the troublesome adhesive. Once we've snuck a few guitar picks in the seam, we're nearly home-free.
- ❗ We're happy to report that no iPads were cracked in the creation of this teardown. We [haven't always](#) been so fortunate.

Step 4



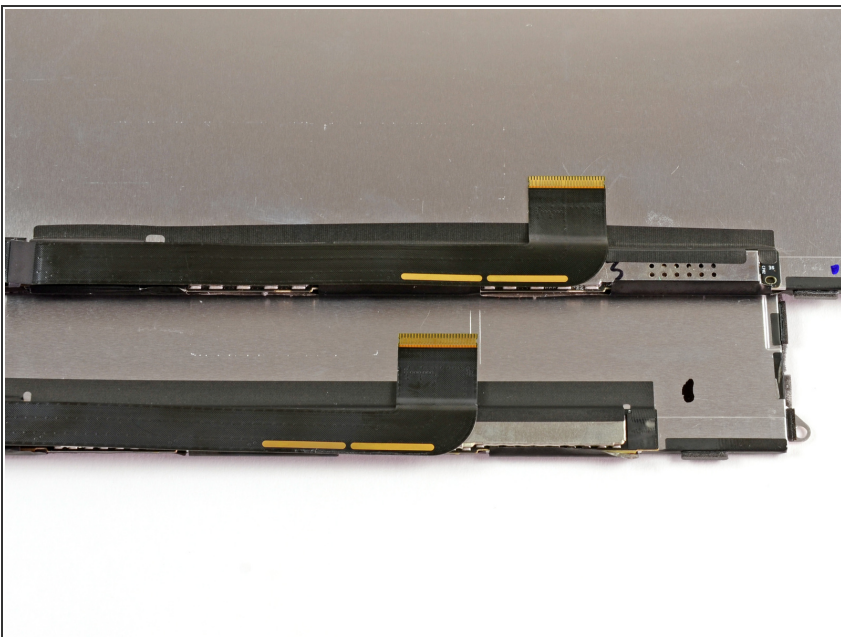
- With the adhesive out of the way, we open up the iPad.
- As expected, this stage looks no different from the previous generation.
- Now that the hard part is out of the way, it's time for a break with a hot cup of drinking chocolate.

Step 5



- As opposed to the Samsung display we found in the iPad 3, the new iPad LCD is manufactured by LG.
- Apple has reportedly been working to move away from Samsung as a primary supplier, so this LG display is not surprising. However, Apple often relies on multiple suppliers for a single component, meaning there are quite likely other LCD manufacturers lurking inside other iPad 4s.

Step 6



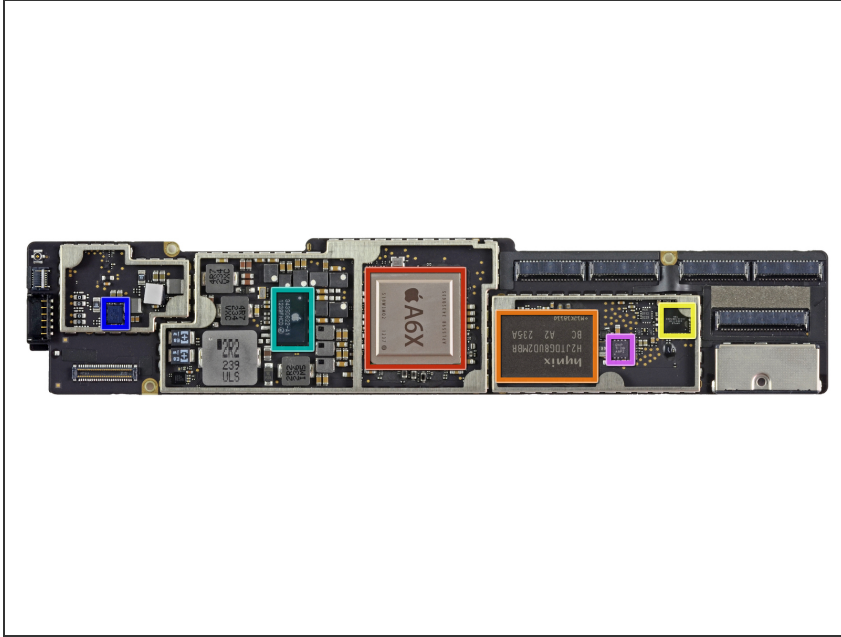
- Continuing to examine differences in the LCD cables...
- Well, Apple used a different color Sharpie.

Step 7



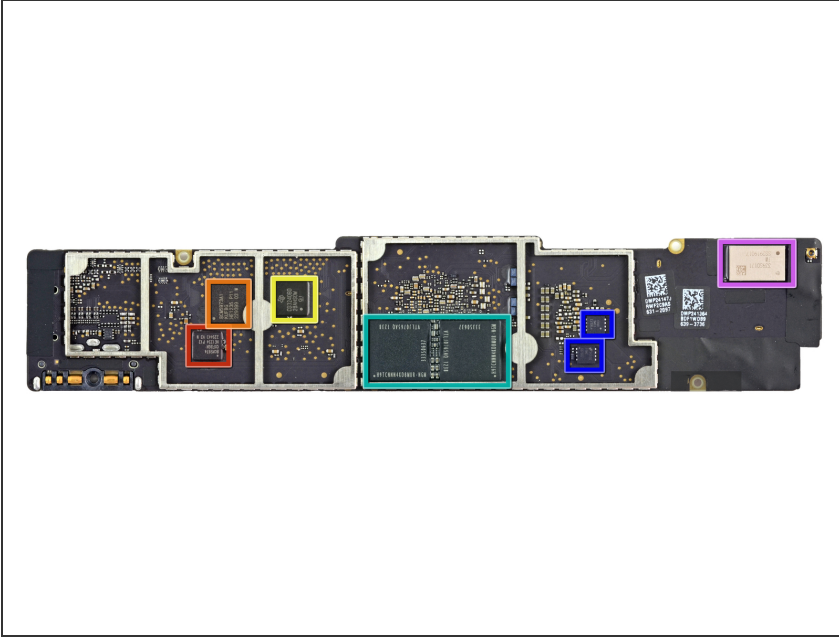
- We lift up the LCD to reveal the battery.
- The battery is labeled with the same model number (A1389) as in the [last round](#), so it's no surprise that it's another 3.7 V, 43 Whr package.
- Like the iPad 3, the battery is adhered *very* securely to the rear case. Since batteries are consumables that wear out, the trend of glued-in, hard-to-access batteries in iPads and other Apple devices is unfortunate.

Step 8



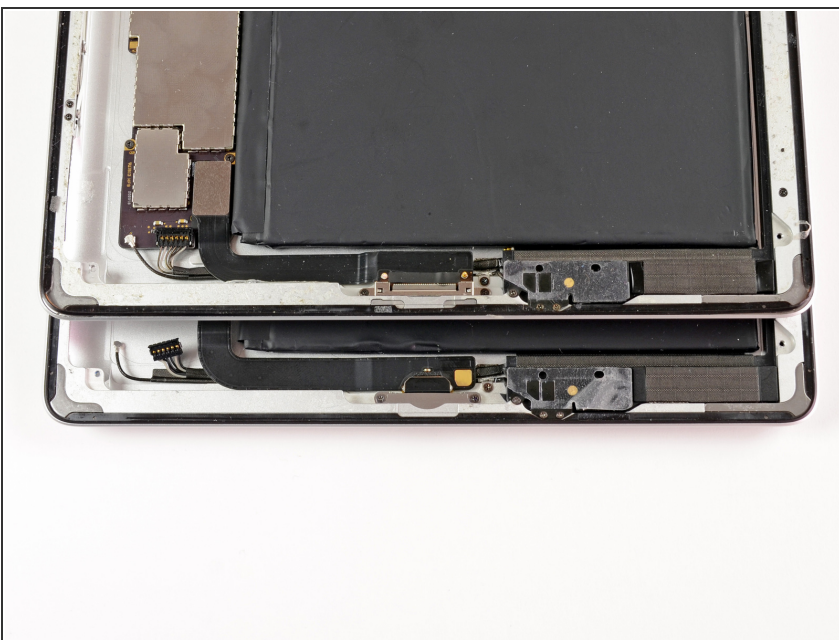
- Skipping ahead to the good stuff, we get a quick look at the biggest improvement in the iPad 4—the A6X and its supporting hardware:
- Apple A6X Processor
- Hynix H2JTDG8UD2MBR 16 GB NAND Flash
- Apple [338S1116](#) Cirrus Logic Audio Codec
- 343S0622-A1 Dialog Semi PMIC
- Apple 338S1077 Cirrus Logic Class D Audio Amplifier
- QVP TI 261 A9P2

Step 9



- The backside of the board, however, boasts no dramatic improvements:
 - Broadcom [BCM5974](#) Touch Screen Controller
 - Broadcom BCM5973A1 Touch Screen Controller
 - Texas Instruments CD3240B0 Touch Screen Line Driver
 - 2 x 4Gb Elpida LP DDR2 = 1 GB DRAM in separate packages in a 64-bit configuration
 - 2 x Fairchild BCHAH/FDMC Voltage Regulator / Reference
 - Murata 339S0171 Broadcom BCM4334 WiFi Module

Step 10



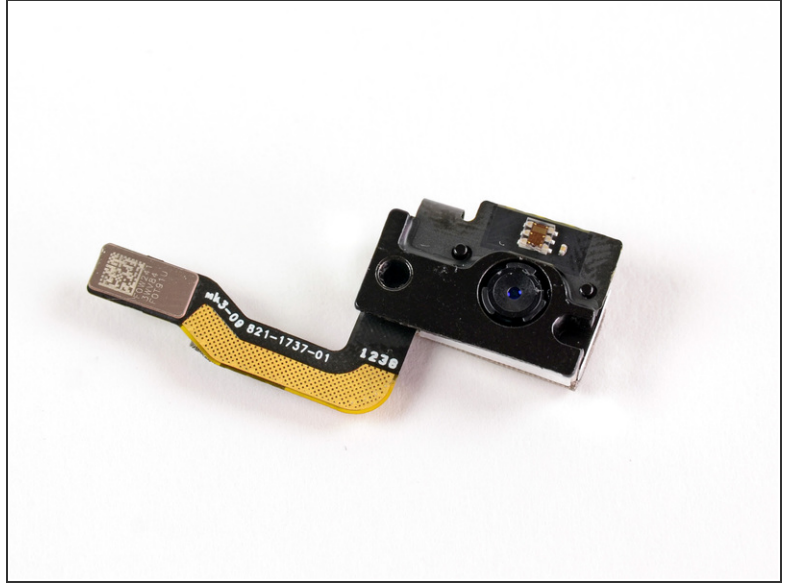
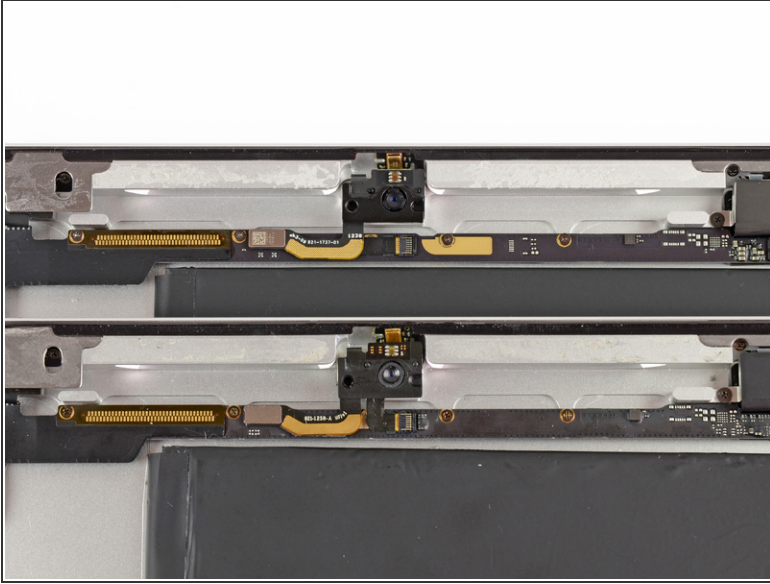
- Apple didn't save any space by switching to the smaller Lightning connector (lower); rather they let the Lightning cable sit in a frame the same size as the 30-pin dock connector (upper).
- ⓘ We were hoping that space savings would yield [bigger, better speakers](#). Very disappointing, indeed.

Step 11



- If you're new to our site, we'll let you in on a little secret: we **love** our [54 Bit Driver Kit](#). It makes quick work freeing the Lightning connector, even with a couple of hard to find screws.
- There is a bit of adhesive holding the connector in, but nothing compared to some adhered components we've [seen before](#).
- Repair techs, DIY-ers, and clumsy iPad-users, rejoice! The Lightning connector is on its very own ribbon cable, meaning that procuring a replacement connector should be fairly inexpensive.

Step 12



- Despite looking almost identical in this shot, we do spot one more difference between the 3rd (top) and 4th (bottom) generations: the front-facing camera!
- We've got a 1.2MP FaceTime HD camera, with the ability to shoot 720p HD video. That's a big improvement from the .3MP FaceTime camera in the iPad 3.
- Compared to the iPad 3, this camera is actually slightly thicker (an extra .4 mm), but it still manages to fit into the same space.

Step 13



- iPad 4 Repairability Score: **2 out of 10** (10 is easiest to repair)
 - The LCD is easy to remove once the front panel is gone.
 - The battery is not soldered to the logic board, making the replacement process a tad less difficult.
 - Just like in the iPad 2 & 3, the front panel is glued to the rest of the device, greatly increasing the chances of cracking the glass when trying to remove it.
 - Gobs, gobs, and gobs of adhesive hold everything in place, including the prone-to-start-a-fire-if-punctured battery.
 - The LCD has foam sticky tape adhering it to the front panel, increasing chances of it being shattered during disassembly.
 - You can't access the front panel's connector until you remove the LCD.

To reassemble your device, follow these instructions in reverse order.

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